

Vermicompost beneficial for organically grown tomatoes

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A study evaluated the effects of adding vermicompost to substrates in organically grown greenhouse tomatoes. Results showed the incorporation of vermicompost into organic substrates to be beneficial in terms of growth and marketable yield. The substrates containing vermicompost also produced a significantly lower incidence of defective fruit when compared with rockwool-grown tomato plants.

Marketable yields of organic horticultural crops frequently fall below those of conventional crops; this and other factors restrict widespread adoption of [organic production](#). Researchers recently studied the growth and yield responses of tomatoes grown in organic substrates amended with vermicompost and compared the results with [plants](#) grown in a popular growing medium. "More research in this area is needed to provide a base of information that will lead to the expansion of the organic sector, especially in the greenhouse industry, to meet consumer demands and preferences", they explained.

Four substrates were used in experiments to determine if any of the substrates could improve the marketable yield of tomatoes when compared with rockwool under [greenhouse conditions](#). The researchers used *Solanum lycopersicum* L. 'beefsteak' tomato in the experiments.

According to the study published in HortScience, the [experimental results](#) revealed significant differences in both the marketable and commercial yields obtained from the organic substrates compared with the rockwool-grown plants. Tomatoes grown in a substrate of coconut

coir/vermicompost and those grown in a substrate composed of aged [pine bark](#)/coconut coir/vermicompost had significantly higher marketable yields per plant when compared with plants grown in rockwool. "The result may be explained by individual components (vermicompost or composted manure) and the right ratios of the combination of the growing substrates", explained author Youbin Zheng. "Both substrates contained varying proportions of vermicompost."

The researchers concluded that the addition of vermicompost to growing substrates in organic production was beneficial for tomato growth. In addition to the benefit of higher yields, the substrates containing vermicompost also produced a significantly lower incidence of defective fruit when compared with rockwool-grown [tomato plants](#).

More information: The complete study and abstract are available on the ASHS HortScience electronic journal web site: [hortsci.ashspublications.org/c ... /abstract/45/10/1510](http://hortsci.ashspublications.org/c.../abstract/45/10/1510)

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